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ctc Leu	tgt Cys	ggc Gly	cca Pro 20	ggc Gly	act Thr	gct Ala	gcc Ala	tgg Trp 25	acc Thr	acc Thr	tca Ser	tcc Ser	ttg Leu 30	gcc Ala	tgt Cys	96
gcc Ala	cag Gln	ggc Gly 35	cct Pro	gag Glu	ttc Phe	tgg Trp	tgc Cys 40	caa Gln	agc Ser	ctg Leu	gag Glu	caa Gln 45	gca Ala	ttg Leu	cag Gln	144
tgc Cys	aga Arg 50	gcc Ala	cta Leu	ggg Gly	cat His	tgc Cys 55	cta Leu	cag Gln	gaa Glu	gtc Val	tgg Trp 60	gga Gly	cat His	gtg Val	gga Gly	192
gcc Ala 65	gat Asp	gac Asp	cta Leu	tgc Cys	caa Gln 70	gag Glu	tgt Cys	gag Glu	gac Asp	atc Ile 75	gtc Val	cac His	atc Ile	ctt Leu	aac Asn 80	240
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gag Glu	cag Gln	gag Glu	tgc Cys 100	aac Asn	gtc Val	ctc Leu	ccc Pro	ttg Leu 105	aag Lys	ctg Leu	ctc Leu	atg Met	ccc Pro 110	cag Gln	tgc Cys	336
aac Asn	caa Gln	gtg Val 115	ctt Leu	gac Asp	gac Asp	tac Tyr	ttc Phe 120	ccc Pro	ctg Leu	gtc Val	atc Ile	gac Asp 125	tac Tyr	ttc Phe	cag Gln	384
aac Asn	cag Gln 130	act Thr	gac Asp	tca Ser	aac Asn	ggc Gly 135	atc Ile	tgt Cys	atg Met	cac His	ctg Leu 140	ggc Gly	ctg Leu	tgc Cys	aaa Lys	432
tcc	cgg	cag	cca	gag	cca	gag	cag	gag	cca	ggg	atg	tca	gac	ссс	ctg	480

Ser 145	Arg	Gln	Pro	Glu	Pro 150	Glu	Gln	Glu	Pro	Gly 155	Met	Ser	Asp	Pro	Leu 160	
						cct Pro										528
gtc Val	ctc Leu	cct Pro	gtg Val 180	ctg Leu	ccc Pro	ggg Gly	gcc Ala	ctc Leu 185	cag Gln	gcg Ala	agg Arg	cct Pro	999 Gly 190	cct Pro	cac His	576
aca Thr	cag Gln	gat Asp 195	ctc Leu	tcc Ser	gag Glu	cag Gln	caa Gln 200	ttc Phe	ccc Pro	att Ile	cct Pro	ctc Leu 205	CCC Pro	tat Tyr	tgc Cys	624
tgg Trp	ctc Leu 210	tgc Cys	agg Arg	gct Ala	ctg Leu	atc Ile 215	aag Lys	cgg Arg	atc Ile	caa Gln	gcc Ala 220	atg Met	att Ile	ccc Pro	aag Lys	672
ggt Gly 225	gcg Ala	cta Leu	gct Ala	gtg Val	gca Ala 230	gtg val	gcc Ala	cag Gln	gtg Val	tgc Cys 235	cgc Arg	gtg Val	gta Val	cct Pro	ctg Leu 240	720
gtg Val	gcg Ala	ggc Gly	ggc Gly	atc Ile 245	tgc Cys	cag Gln	tgc Cys	ctg Leu	gct Ala 250	gag Glu	cgc Arg	tac Tyr	tcc Ser	gtc Val 255	atc Ile	768
ctg Leu	ctc Leu	gac Asp	acg Thr 260	ctg Leu	ctg Leu	ggc Gly	cgc Arg	atg Met 265	ctg Leu	ccc Pro	cag Gln	ctg Leu	gtc Val 270	tgc Cys	cgc Arg	816
ctc Leu	gtc Val	ctc Leu 275	cgg Arg	tgc Cys	tcc Ser	atg Met	gat Asp 280	gac Asp	agc Ser	gct Ala	ggc Gly	cca Pro 285	agg Arg	tcg Ser	ccg Pro	864
aca Thr	gga Gly 290	gaa Glu	tgg Trp	ctg Leu	ccg Pro	cga Arg 295	gac Asp	tct Ser	gag Glu	tgc Cys	cac His 300	ctc Leu	tgc Cys	atg Met	tcc Ser	912
gtg Val 305	acc Thr	acc Thr	cag Gln	gcc Ala	ggg Gly 310	aac Asn	agc Ser	agc Ser	gag Glu	cag Gln 315	gcc Ala	ata Ile	cca Pro	cag Gln	gca Ala 320	960
atg Met	ctc Leu	cag Gln	gcc Ala	tgt Cys 325	gtt Val	ggc Gly	tcc Ser	tgg Trp	ctg Leu 330	gac Asp	agg Arg	gaa Glu	aag Lys	tgc Cys 335	aag Lys	1008
caa Gln	ttt Phe	gtg Val	gag Glu 340	cag Gln	cac His	acg Thr	ccc Pro	cag Gln 345	ctg Leu	ctg Leu	acc Thr	ctg Leu	gtg Val 350	ccc Pro	agg Arg	1056
ggc Gly	tgg Trp	gat Asp 355	gcc Ala	cac His	acc Thr	acc Thr	tgc Cys 360	cag Gln	gcc Ala	ctc Leu	ggg Gly	gtg Val 365	tgt Cys	ggg Gly	acc Thr	1104
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                                                           15
ctc tgt ggc cca ggc act gct gcc tgg acc acc tca tcc ttg gcc tgt
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Leu Cys Gly Pro Gly Thr Ala Ala Trp Thr Thr Ser Ser Leu Ala Cys
             20
gcc cag ggc cct gag ttc tgg tgc caa agc ctg gag caa gca ttg cag
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Ala Gln Gly Pro Glu Phe Trp Cys Gln Ser Leu Glu Gln Ala Leu Gln
tgc aga gcc cta ggg cat tgc cta cag gaa gtc tgg gga cat gtg gga
                                                                          192
Cys Arg Ala Leu Gly His Cys Leu Gln Glu Val Trp Gly His Val Gly
     50
                                              60
gcc gat gac cta tgc caa gag tgt gag gac atc gtc cac atc ctt aac
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Ala Asp Asp Leu Cys Gln Glu Cys Glu Asp Ile Val His Ile Leu Asn
 65
                      70
                                          75
                                                               80
aag atg gcc aag gag gcc att ttc cag gac acg atg agg aag ttc ctg
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Lys Met Āla Lys Glū Āla Ile Phe Glī Āsp Thr Met Arg Lys Phe Leū
                 85
                                                          95
gag cag gag tgc aac gtc ctc ccc ttg aag ctg ctc atg ccc cag tgc
                                                                          336
Ğlū Gln Ğlū Cys Asn Val Leu Pro Leū Lys Leu Leu Met Pro Gln Cys
                                 105
aac caa gtg ctt gac gac tac ttc ccc ctg gtc atc gac tac ttc cag
                                                                          384
Asn Gln Val Leu Asp Asp Tyr Phe Pro Leu Val Ile Asp Tyr Phe Gln
        115
                             120
aac cag act gac tca aac ggc atc tgt atg cac ctg ggc ctg tgc aaa
                                                                         432
Asn Gln Thr Asp Ser Asn Gly Ile Cys Met His Leu Gly Leu Cys Lys
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tcc cgg cag cca gag cca gag cag gag cca ggg atg tca gac ccc ctg
                                                                         480
Ser Arg Gln Pro Glu Pro Glu Gln Glu Pro Gly Met Ser Asp Pro Leu
145
                    150
                                                             160
ccc aaa cct ctg cgg gac cct ctg cca gac cct ctg ctg gac aag ctc
                                                                         528
Pro Lys Pro Leu Arg Asp Pro Leu Pro Asp Pro Leu Leu Asp Lys Leu
                165
                                     170
gtc ctc cct gtg ctg ccc ggg gcc ctc cag gcg agg cct ggg cct cac
                                                                         576
Val Leu Pro Val Leu Pro Gly Ala Leu Gln Ala Arg Pro Gly Pro His
            180
                                 185
                                                     190
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Thr Glr	gat ctc Asp Leu 195	tcc g Ser 0	gag cag Glu Gln	caa Gln 200	ttc Phe	ccc Pro	att Ile	cct Pro	ctc Leu 205	ccc Pro	tat Tyr	tgc Cys	624
tgg cto Trp Leu 210	tgc agg Cys Arg	gct c Ala L	ctg atc Leu Ile 215	aag Lys	cgg Arg	atc Ile	caa Gln	gcc Ala 220	atg Met	att Ile	ccc Pro	aag Lys	672
ggt gcg Gly Ala 225	cta gct Leu Ala	Val A	gca gtg Ala Val 230	gcc Ala	cag Gln	gtg Val	tgc Cys 235	cgc Arg	gtg Val	gta Val	cct Pro	ctg Leu 240	720
gtg gcg Val Ala	ggc ggc Gly Gly	atc t Ile C 245	tgc cag Cys Gln	tgc Cys	ctg Leu	gct Ala 250	gag Glu	cgc Arg	tac Tyr	tcc Ser	gtc Val 255	atc Ile	768
ctg ctc Leu Leu	gac acg Asp Thr 260	Leu L	ctg ggc Leu Gly	cgc Arg	atg Met 265	ctg Leu	ccc Pro	cag Gln	ctg Leu	gtc Val 270	tgc Cys	cgc Arg	816
	ctc cgg Leu Arg 275												837
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<220>
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                                                                         96
gac tcc aaa ggc agc aat gaa ctt cat caa gtt cca tcg aac tgt gac
Asp Ser Lys Gly Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp
tgt cta aat gga gga aca tgt gtg tcc aac aag tac ttc tcc aac att
                                                                         144
Cys Leu Asn Gly Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile
         35
                                                  45
cac tgg tgc aac tgc cca aag aaa ttc gga ggg cag cac tgt gaa ata
                                                                         192
His Trp Cys Asn Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile
gat aag tca aaa acc tgc tat gag ggg aat ggt cac ttt tac cga gga
                                                                         240
Asp Lys Ser Lys Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly
                                                              80
aag gcc agc act gac acc atg ggc cgg ccc tgc ctg ccc tgg aac tct
                                                                         288
Lys Ala Ser Thr Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser
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                                      90
gcc act gtc ctt cag caa acg tac cat gcc cac aga tct gat gct ctt
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Ala Thr Val Leu Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu
                            105
cag ctg ggc ctg ggg aaa cat aat tac tgc agg aac cca gac aac cgg
                                                                         384
Gln Leu Gly Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg
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                             120
                                                 125
                                                                         432
agg cga ccc tgg tgc tat gtg cag gtg ggc cta aag ccg ctt gtc caa
Arg Arg Pro Trp Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln
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gag tgc atg gtg cat gac tgc gca gat gga aaa aag ccc tcc tct cct
                                                                         480
Glu Cys Met Val His Asp Cys Ala Asp Gly Lys Lys Pro Ser Ser Pro
145
                    150
                                                             160
                                                                         528
cca gaa gaa tta aaa ttt cag tgt ggc caa aag act ctg agg ccc cgc
Pro Glu Glu Leu Lys Phe Gln Cys Gly Gln Lys Thr Leu Arg Pro Arg
                165
                                     170
                                                         175
                                                                         576
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Phe Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile Glu Asn Gln Pro Trp
            180
                                 185
                                                                         624
ttt gcg gcc atc tac agg agg cac cgg ggg ggc tct gtc acc tac gtg
Phe Ala Ala Ile Tyr Arg Arg His Arg Gly Gly Ser Val Thr Tyr Val
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			195					200					205		•		
	tgt Cys	gga Gly 210	ggc Gly	agc Ser	ctc Leu	atc Ile	agc Ser 215	cct Pro	tgc Cys	tgg Trp	gtg Val	atc Ile 220	agc ser	gcc Ala	aca Thr	cac His	672
	tgc Cys 225	ttc Phe	att Ile	gat Asp	tac Tyr	cca Pro 230	aag Lys	aag Lys	gag Glu	gac Asp	tac Tyr 235	atc Ile	gtc Val	tac Tyr	ctg Leu	ggt Gly 240	720
	cgc Arg	tca Ser	agg Arg	ctt Leu	aac Asn 245	tcc Ser	aac Asn	acg Thr	caa Gln	ggg Gly 250	gag Glu	atg Met	aag Lys	ttt Phe	gag Glu 255	gtg Val	768
	gaa Glu	aac Asn	ctc Leu	atc Ile 260	cta Leu	cac His	aag Lys	gac Asp	tac Tyr 265	agc Ser	gct Ala	gac Asp	acg Thr	ctt Leu 270	gct Ala	cac His	816
	cac His	aac Asn	gac Asp 275	att Ile	gcc Ala	ttg Leu	ctg Leu	aag Lys 280	atc Ile	cgt Arg	tcc Ser	aag Lys	gag G1u 285	ggc Gly	agg Arg	tgt Cys	864
	gcg Ala	cag Gln 290	cca Pro	tcc Ser	cgg Arg	act Thr	ata Ile 295	cag Gln	acc Thr	atc Ile	tgc Cys	ctg Leu 300	ccc Pro	tcg Ser	atg Met	tat Tyr	912
ı	aac Asn 305	gat Asp	ccc Pro	cag Gln	ttt Phe	ggc Gly 310	aca Thr	agc Ser	tgt Cys	gag Glu	atc Ile 315	act Thr	ggc Gly	ttt Phe	gga Gly	aaa Lys 320	960
	gag Glu	aat Asn	tct Ser	acc Thr	gac Asp 325	tat Tyr	ctc Leu	tat Tyr	ccg Pro	gag Glu 330	cag Gln	ctg Leu	aaa Lys	atg Met	act Thr 335	gtt Val	1008
	gtg Val	aag Lys	ctg Leu	att Ile 340	tcc Ser	cac His	cgg Arg	gag Glu	tgt Cys 345	cag Gln	cag Gln	ccc Pro	cac His	tac Tyr 350	tac Tyr	ggc Gly	1056
	tct Ser	gaa Glu	gtc Val 355	acc Thr	acc Thr	aaa Lys	atg Met	ctg Leu 360	tgt Cys	gct Ala	gct Ala	gac Asp	cca Pro 365	cag Gln	tgg Trp	aaa Lys	1104
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	gcc Ala	ctg Leu	aag Lys	gac Asp	aag Lys 405	cca Pro	ggc Gly	gtc Val	tac Tyr	acg Thr 410	aga Arg	gtc Val	tca Ser	cac His	ttc Phe 415	tta Leu	1248
	ccc Pro	tgg Trp	atc Ile	cgc Arg 420	agt Ser	cac His	acc Thr	aag Lys	gaa Glu 425	gag Gln	aat Asn	ggc Gly	ctg Leu	gcc Ala 430			1293

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act ctg agg ccc cgc ttt aag att att ggg gga gaa ttc acc acc atc
                                                                         96
Thr Leu Arg Pro Arg Phe Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile
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                                                      30
gag aac cag ccc tgg ttt gcg gcc atc tac agg agg cac cgg ggg ggc
                                                                         144
Glu Asn Gln Pro Trp Phe Ala Ala Ile Tyr Arg Arg His Arg Gly Gly
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tct gtc acc tac gtg tgt gga ggc agc ctc atc agc cct tgc tgg gtg
                                                                         192
Ser Val Thr Tyr Val Cys Gly Gly Ser Leu Ile Ser Pro Cys Trp Val
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atc agc gcc aca cac tgc ttc att gat tac cca aag aag gag gac tac
                                                                         240
Ile Ser Ala Thr His Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr
 65
atc gtc tac ctg ggt cgc tca agg ctt aac tcc aac acg caa ggg gag
                                                                         288
Ile Val Tyr Leu Gly Arg Ser Arg Leu Asn Ser Asn Thr Gln Gly Glu
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                                                                         336
atg aag ttt gag gtg gaa aac ctc atc cta cac aag gac tac agc gct
Met Lys Phe Glu Val Glu Asn Leu Ile Leu His Lys Asp Tyr Ser Ala
                                 105
gac acg ctt gct cac cac aac gac att gcc ttg ctg aag atc cgt tcc
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Asp Thr Leu Ala His His Asn Asp Ile Ala Leu Leu Lys Ile Arg Ser
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                                                                         432
aag gag ggc agg tgt gcg cag cca tcc cgg act ata cag acc atc tgc
Lys Glu Gly Arg Cys Ala Gln Pro Ser Arg Thr Ile Gln Thr Ile Cys
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                        135
ctg ccc tcg atg tat aac gat ccc cag ttt ggc aca agc tgt gag atc
                                                                         480
Leu Pro Ser Met Tyr Asn Asp Pro Gli Phe Gly Thr Ser Cys Glu Ile
145
                    150
                                                             160
act ggc ttt gga aaa gag aat tct acc gac tat ctc tat ccg gag cag
                                                                         528
Thr Gly Phe Gly Lys Glu Asn Ser Thr Asp Tyr Leu Tyr Pro Glu Gln
                165
                                     170
ctg aaa atg act gtt gtg aag ctg att tcc cac cgg gag tgt cag cag
                                                                         576
Leu Lys Met Thr Val Val Lys Leu Ile Ser His Arg Glu Cys Gln Gln
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                                 185
                                                     190
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ccc cac tac tac ggc tct gaa gtc acc acc aaa atg ctg tgt gct gct
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Pro His Tyr Tyr Gly Ser Glu Val Thr Thr Lys Met Leu Cys Ala Ala
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Asp Pro Gln Trp Lys Thr Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro
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                         215
ctc gtc tgt tcc ctc caa ggc cgc atg act ttg act gga att gtg agc
                                                                         720
Leu Val Cys Ser Leu Gln Gly Arg Met Thr Leu Thr Gly Ile Val Ser
225
                    230
                                         235
                                                             240
tgg ggc cgt gga tgt gcc ctg aag gac aag cca ggc gtc tac acg aga
                                                                         768
Trp Gly Arg Gly Cys Ala Leu Lys Asp Lys Pro Gly Val Tyr Thr Arg
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                                     250
                                                         255
gtc tca cac ttc tta ccc tgg atc cgc agt cac acc aag gaa gag aat
                                                                         816
Val Ser His Phe Leu Pro Trp Ile Arg Ser His Thr Lys Glu Gln Asn
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Gly Leu Ala Leu
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Met Ala Glu Ser His Leu Leu Gln Trp Leu Leu Leu Leu Pro Thr
                                                          15
ctc tgt ggc cca ggc act gct gcc tgg acc acc tca tcc ttg gcc tgt
                                                                         96
Leu Cys Gly Pro Gly Thr Ala Ala Trp Thr Thr Ser Ser Leu Ala Cys
gcc cag ggc cct gag ttc tgg tgc caa agc ctg gag caa gca ttg cag
                                                                         144
Ala Gln Gly Pro Glu Phe Trp Cys Gln Ser Leu Glu Gln Ala Leu Gln
tgc aga gcc cta ggg cat tgc cta cag gaa gtc tgg gga cat gtg gga
                                                                         192
Cys Arg Ala Leu Gly His Cys Leu Gln Glu Val Trp Gly His Val Gly
     50
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 Thr Glu Met Val Leu Glu Met Ser Ile Gly Ala Pro Glu Ala Gln Gln
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Leu Lys Arg Leu Leu Ile Val Val Val Val Val Leu Ile Val Val
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tac Tyr	ggc Gly 450	aag Lys	cat His	gag Glu	gcc Ala	ttg Leu 455	tct Ser	cct Pro	ttc Phe	tat Tyr	tcg Ser 460	gag Glu	cgg Arg	ctg Leu	aag Lys	1392
gag Glu 465	gct Ala	cat His	gtc Val	aga Arg	ctg Leu 470	tac Tyr	cca Pro	tcc Ser	agc Ser	cgc Arg 475	tgc Cys	aca Thr	tca Ser	caa Gln	cat His 480	1440
tta Leu	ctt Leu	aac Asn	aga Arg	aca Thr 485	gtc Val	acc Thr	gac Asp	aac Asn	atg Met 490	ctg Leu	tgt Cys	gct Ala	gga Gly	_	act Thr	1488
cgg	agc	ggc	ggg	ccc	cag	gca	aac	ttg	cac	gac	gcc	tgc	cag	ggc	gat	1536

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Arg Ser Gly Gly Pro Gln Ala Asn Leu His Asp Ala Cys Gln Gly Asp
            500
                                 505
                                                      510
tcg gga ggc ccc ctg gtg tgt ctg aac gat ggc cgc atg act ttg gtg
                                                                          1584
Ser Gly Gly Pro Leu Val Cys Leu Asn Asp Gly Arg Met Thr Leu Val
        515
ggc atc atc agc tgg ggc ctg ggc tgt gga cag aag gat gtc ccg ggt
                                                                          1632
Gly Ile Ile Ser Trp Gly Leu Gly Cys Gly Gln Lys Asp Val Pro Gly
                         535
    530
gtg tac acc aag gtt acc aac tac cta gac tgg att cgt gac aac atg
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Val Tyr Thr Lys Val Thr Asn Tyr Leu Asp Trp Ile Arg Asp Asn Met
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Met Ala Glu Ser His Leu Leu Gln Trp Leu Leu Leu Leu Pro Thr
ctc tgt ggc cca ggc act gct gcc tgg ttc ccc att cct ctc ccc tat
                                                                          96
Leu Cys Gly Pro Gly Thr Ala Ala Trp Phe Pro Ile Pro Leu Pro Tyr
             20
                                                      30
                                                                          144
tgc tgg ctc tgc agg gct ctg atc aag cgg atc caa gcc atg att ccc
Cys Trp Leu Cys Arg Ala Leu Ile Lys Arg Ile Gln Ala Met Ile Pro
         35
aag ggt gcg cta gct gtg gca gtg gcc cag gtg tgc cgc gtg gta cct
                                                                         192
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Lys	G]y 50	Ala	Leu	Ala	Val	Ala 55	Val	Ala	Gln	Val	Cys 60	Arg	Val	Val	Pro		
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atc Ile	ctg Leu	ctc Leu	gac Asp	acg Thr 85	ctg Leu	ctg Leu	ggc Gly	cgc Arg	atg Met 90	ctg Leu	ccc Pro	cag Gln	ctg Leu	gtc Val 95	tgc Cys	ā	288
cgc Arg	ctc Leu	gtc Val	ctc Leu 100	cgg Arg	tgc Cys	tcc Ser	atg Met	aag Lys 105	ccc Pro	tcc Ser	tct Ser	cct Pro	cca Pro 110	gaa Glu	gaa Glu	3	336
tta Leu	aaa Lys	ttt Phe 115	cag Gln	tgt Cys	ggc Gly	caa Gln	aag Lys 120	act Thr	ctg Leu	agg Arg	ccc Pro	cgc Arg 125	ttt Phe	aag Lys	att Ile	3	384
att Ile	ggg Gly 130	gga Gly	gaa Glu	ttc Phe	acc Thr	acc Thr 135	atc Ile	gag Glu	aac Asn	cag Gln	ccc Pro 140	tgg Trp	ttt Phe	gcg Ala	gcc Ala	4	132
atc Ile 145	tac Tyr	agg Arg	agg Arg	cac His	cgg Arg 150	ggg Gly	ggc Gly	tct Ser	gtc Val	acc Thr 155	tac Tyr	gtg Val	tgt Cys	gga Gly	ggc Gly 160	4	180
agc Ser	ctc Leu	atc Ile	agc Ser	cct Pro 165	tgc Cys	tgg Trp	gtg Val	atc Ile	agc Ser 170	gcc Ala	aca Thr	cac His	tgc Cys	ttc Phe 175	att Ile	5	528
gat Asp	tac Tyr	cca Pro	aag Lys 180	aag Lys	gag Glu	gac Asp	tac Tyr	atc Ile 185	gtc Val	tac Tyr	ctg Leu	ggt Gly	cgc Arg 190	tca Ser	agg Arg	5	576
ctt Leu	aac Asn	tcc Ser 195	aac Asn	acg Thr	caa Gln	ggg Gly	gag Glu 200	atg Met	aag Lys	ttt Phe	gag Glu	gtg Val 205	gaa Glu	aac Asn	ctc Leu	6	524
atc Ile	cta Leu 210	cac His	aag Lys	gac Asp	tac Tyr	agc Ser 215	gct Ala	gac Asp	acg Thr	ctt Leu	gct Ala 220	cac His	cac His	aac Asn	gac Asp	6	572
att Ile 225	gcc Ala	ttg Leu	ctg Leu	aag Lys	atc Ile 230	cgt Arg	tcc Ser	aag Lys	gag Glu	ggc Gly 235	agg Arg	tgt Cys	gcg Ala	cag Gln	cca Pro 240	7	720
tcc Ser	cgg Arg	act Thr	ata Ile	cag Gln 245	acc Thr	atc Ile	tgc Cys	ctg Leu	ccc Pro 250	tcg Ser	atg Met	tat Tyr	aac Asn	gat Asp 255	ccc Pro	7	768
cag Gln	ttt Phe	ggc Gly	aca Thr 260	agc Ser	tgt Cys	gag Glu	atc Ile	act Thr 265	ggc Gly	ttt Phe	gga Gly	aaa Lys	gag Glu 270	aat Asn	tct Ser	8	316
				tat Tyr												8	364
att	tcc	cac	cgg	gag	tgt	cag	cag	ССС	cac	tac	tac	ggc	tct	gaa	gtc	9	12

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Ile Ser His Arg Glu Cys Gln Gln Pro His Tyr Tyr Gly Ser Glu Val
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acc acc aaa atg ctg tgt gct gct cca cag tgg aaa aca gat tcc
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Thr Thr Lys Met Leu Cys Ala Ala Asp Pro Gln Trp Lys Thr Asp Ser
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tgc cag gga gac tca ggg gga ccc ctc gtc tgt tcc ctc caa ggc cgc
                                                                         1008
Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Ser Leu Gln Gly Arg
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                                     330
atg act ttg act gga att gtg agc tgg ggc cgt gga tgt gcc ctg aag
                                                                         1056
Met Thr Leu Thr Gly Ile Val Ser Trp Gly Arg Gly Cys Ala Leu Lys
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                                 345
                                                     350
gac aag cca ggc gtc tac acg aga gtc tca cac ttc tta ccc tgg atc
                                                                         1104
Asp Lys Pro Gly Val Tyr Thr Arg Val Ser His Phe Leu Pro Trp Ile
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                             360
cgc agt cac acc aag gaa gag aat ggc ctg gcc ctc cat cat cat
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Arg Ser His Thr Lys Glu Gln Asn Gly Leu Ala Leu His His His
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cat cat
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His His
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Met Arg Ala Leu Leu Ala Arg Leu Leu Cys Val Leu Val Val Ser
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ga As _l	tcc Ser	aaa Lys	ggc Gly 20	Ser	aat Asn	aag Lys	CCC Pro	tcc ser 25	tct Ser	cct Pro	cca Pro	gaa Glu	gaa Glu 30	tta Leu	aaa Lys	96
tt [.] Ph	cag Gln	tgt Cys 35	ggc Gly	caa Gln	aag Lys	act Thr	ctg Leu 40	agg Arg	ccc Pro	cgc Arg	ttt Phe	aag Lys 45	att Ile	att Ile	ggg Gly	144
gga Gly	gaa Glu 50	ttc Phe	acc Thr	acc Thr	atc Ile	gag Glu 55	aac Asn	cag Gln	ccc Pro	tgg Trp	ttt Phe 60	gcg Ala	gcc Ala	atc Ile	tac Tyr	192
age Are 6	agg Arg	cac His	cgg Arg	ggg Gly	ggc Gly 70	tct Ser	gtc Val	acc Thr	tac Tyr	gtg val 75	tgt Cys	gga Gly	ggc Gly	agc Ser	ctc Leu 80	240
ato Ile	agc Ser	cct Pro	tgc Cys	tgg Trp 85	gtg Val	atc Ile	agc Ser	gcc Ala	aca Thr 90	cac His	tgc Cys	ttc Phe	att Ile	gat Asp 95	tac Tyr	288
CCa Pro	aag Lys	aag Lys	gag Glu 100	gac Asp	tac Tyr	atc Ile	gtc Val	tac Tyr 105	ctg Leu	ggt Gly	cgc Arg	tca Ser	agg Arg 110	ctt Leu	aac Asn	336
tc(Se)	aac Asn	acg Thr 115	caa Gln	ggg Gly	gag Glu	atg Met	aag Lys 120	ttt Phe	gag Glu	gtg Val	gaa Glu	aac Asn 125	ctc Leu	atc Ile	cta Leu	384
cac His	aag Lys 130	gac Asp	tac Tyr	agc Ser	gct Ala	gac Asp 135	acg Thr	ctt Leu	gct Ala	cac His	cac His 140	aac Asn	gac Asp	att Ile	gcc Ala	432
tte Lei 145	ctg Leu	aag Lys	atc Ile	cgt Arg	tcc ser 150	aag Lys	gag Glu	ggc Gly	agg Arg	tgt Cys 155	gcg Ala	cag Gln	cca Pro	tcc Ser	cgg Arg 160	480
act Th	ata Ile	cag Gln	acc Thr	atc Ile 165	tgc Cys	ctg Leu	ccc Pro	tcg Ser	atg Met 170	tat Tyr	aac Asn	gat Asp	ccc Pro	cag Gln 175	ttt Phe	528
ggo Gly	aca Thr	agc Ser	tgt Cys 180	gag Glu	atc Ile	act Thr	ggc Gly	ttt Phe 185	gga Gly	aaa Lys	gag Glu	aat Asn	tct Ser 190	acc Thr	gac Asp	576
ta1 Tyr	ctc Leu	tat Tyr 195	ccg Pro	gag Glu	cag Gln	ctg Leu	aaa Lys 200	atg Met	act Thr	gtt Val	gtg Val	aag Lys 205	_	-		624
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aaa Lys 225	atg Met	ctg Leu	tgt Cys	gct Ala	gct Ala 230	gac Asp	cca Pro	cag Gln	tgg Trp	aaa Lys 235	aca Thr	gat Asp	tcc Ser	tgc Cys	cag Gln 240	720
gga Gly	gac Asp	tca Ser	ggg Gly	gga Gly 245	ccc Pro	ctc Leu	gtc Val	tgt Cys	tcc Ser 250	ctc Leu	caa Gln	ggc Gly	cgc Arg	atg Met 255		768

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Leu Thr Gly Ile Val Ser Trp Gly Arg Gly Cys Ala Leu Lys Asp Lys
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                                 265
cca ggc gtc tac acg aga gtc tca cac ttc tta ccc tgg atc cgc agt
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Pro Gly Val Tyr Thr Arg Val Ser His Phe Leu Pro Trp Ile Arg Ser
        275
                                                 285
                             280
cac acc aag gaa gag aat ggc ctg gcc ctc ttc ccc att cct ctc ccc
                                                                          912
His Thr Lys Glu Gln Asn Gly Leu Ala Leu Phe Pro Ile Pro Leu Pro
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                         295
tat tgc tgg ctc tgc agg gct ctg atc aag cgg atc caa gcc atg att
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Tyr Cys Trp Leu Cys Arg Ala Leu Ile Lys Arg Ile Gln Ala Met Ile
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                                                              320
ccc aag ggt gcg cta gct gtg gca gtg gcc cag gtg tgc cgc gtg gta
                                                                          1008
Pro Lys Gly Ala Leu Ala Val Ala Val Ala Gln Val Cys Arg Val Val
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                                     330
                                                          335
cct ctg gtg gcg ggc atc tgc cag tgc ctg gct gag cgc tac tcc
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Pro Leu Val Ala Gly Gly Ile Cys Gln Cys Leu Ala Glu Arg Tyr Ser
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                                 345
                                                     350
gtc atc ctg ctc gac acg ctg ctg ggc cgc atg ctg ccc cag ctg gtc
                                                                          1104
Val Ile Leu Leu Asp Thr Leu Leu Gly Arg Met Leu Pro Gln Leu Val
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                                                 365
tgc cgc ctc gtc ctc cgg tgc tcc atg cat cat cat cat cat
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Ala Gln Gly Pro Glu Phe Trp Cys Gln Ser Leu Glu Gln Ala Leu Gln
35 40 45
Cys Arg Ala Leu Gly His Cys Leu Gln Glu Val Trp Gly His Val Gly
Ala Asp Asp Leu Cys Gln Glu Cys Glu Asp Ile Val His Ile Leu Asn
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Lys Met Ala Lys Glu Ala Ile Phe Gln Asp Thr Met Arg Lys Phe Leu Glu Gln Glu Cys Asn Val Leu Pro Leu Lys Leu Leu Met Pro Gln Cys Asn Gln Val Leu Asp Asp Tyr Phe Pro Leu Val Ile Asp Tyr Phe Gln 115 120 Asn Gln Thr Asp Ser Asn Gly Ile Cys Met His Leu Gly Leu Cys Lys 130 Ser Arg Gln Pro Glu Pro Glu Gln Glu Pro Gly Met Ser Asp Pro Leu 145 150 160 Pro Lys Pro Leu Arg Asp Pro Leu Pro Asp Pro Leu Leu Asp Lys Leu Val Leu Pro Val Leu Pro Gly Ala Leu Gln Ala Arg Pro Gly Pro His 180 190 Thr Gln Asp Leu Ser Glu Gln Gln Phe Pro Ile Pro Leu Pro Tyr Cys Trp Leu Cys Arg Ala Leu Ile Lys Arg Ile Gln Ala Met Ile Pro Lys 210 215 220 Gly Ala Leu Ala Val Ala Val Ala Gln Val Cys Arg Val Val Pro Leu 240 230 Val Ala Gly Gly Ile Cys Gln Cys Leu Ala Glu Arg Tyr Ser Val Ile 245 250 255 Leu Leu Asp Thr Leu Leu Gly Arg Met Leu Pro Gln Leu Val Cys Arg 260 265 270 Leu Val Leu Arg Cys Ser Met Asp Asp Ser Ala Gly Pro Arg Ser Pro Thr Gly Glu Trp Leu Pro Arg Asp Ser Glu Cys His Leu Cys Met Ser 290 Val Thr Thr Gln Ala Gly Asn Ser Ser Glu Gln Ala Ile Pro Gln Ala 305 320 Met Leu Gln Ala Cys Val Gly Ser Trp Leu Asp Arg Glu Lys Cys Lys Gln Phe Val Glu Gln His Thr Pro Gln Leu Leu Thr Leu Val Pro Arg 340 Gly Trp Asp Ala His Thr Thr Cys Gln Ala Leu Gly Val Cys Gly Thr Met Ser Ser Pro Leu Gln Cys Ile His Ser Pro Asp Leu

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Cys Arg Ala Leu Gly His Cys Leu Gln Glu Val Trp Gly His Val Gly
Ala Asp Asp Leu Cys Gln Glu Cys Glu Asp Ile Val His Ile Leu Asn
Lys Met Ala Lys Glu Ala Ile Phe Gln Asp Thr Met Arg Lys Phe Leu
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Glu Gln Glu Cys Asn Val Leu Pro Leu Lys Leu Leu Met Pro Gln Cys
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Asn Gln Val Leu Asp Asp Tyr Phe Pro Leu Val Ile Asp Tyr Phe Gln
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                             120
Asn Gln Thr Asp Ser Asn Gly Ile Cys Met His Leu Gly Leu Cys Lys
Ser Arg Gln Pro Glu Pro Glu Gln Glu Pro Gly Met Ser Asp Pro Leu
145
                                                             160
Pro Lys Pro Leu Arg Asp Pro Leu Pro Asp Pro Leu Leu Asp Lys Leu
                                     170
Val Leu Pro Val Leu Pro Gly Ala Leu Gln Ala Arg Pro Gly Pro His
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Thr Gln Asp Leu Ser Glu Gln Gln Phe Pro Ile Pro Leu Pro Tyr Cys
                             200
                                                 205
Trp Leu Cys Arg Ala Leu Ile Lys Arg Ile Gln Ala Met Ile Pro Lys
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Gly Ala Leu Ala Val Ala Val Ala Gln Val Cys Arg Val Val Pro Leu
225
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                                                             240
Val Ala Gly Gly Ile Cys Gln Cys Leu Ala Glu Arg Tyr Ser Val Ile
Leu Leu Asp Thr Leu Leu Gly Arg Met Leu Pro Gln Leu Val Cys Arg
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<223> Mature surfactant protein B

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Arg Ile Gln Ala Met Ile Pro Lys Gly Ala Leu Ala Val Ala Val Ala 20 . 25 . 30

Gln Val Cys Arg Val Val Pro Leu Val Ala Gly Gly Ile Cys Gln Cys
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45

Leu Ala Glu Arg Tyr Ser Val Ile Leu Leu Asp Thr Leu Leu Gly Arg 50 60

Met Leu Pro Gln Leu Val Cys Arg Leu Val Leu Arg Cys Ser Met 70 75

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Cys Leu Asn Gly Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile 35 40 45

His Trp Cys Asn Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile 50 60

Asp Lys Ser Lys Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly

65 70 75 80

Lys Ala Ser Thr Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser 95 85

Ala Thr Val Leu Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu 100

Gln Leu Gly Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg 115 120 125

Arg Arg Pro Trp Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln 130 140

Glu Cys Met Val His Asp Cys Ala Asp Gly Lys Lys Pro Ser Ser Pro 145 150 155 160

Pro Glu Glu Leu Lys Phe Gln Cys Gly Gln Lys Thr Leu Arg Pro Arg 165 170 175

Phe Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile Glu Asn Gln Pro Trp 180 185 190

Phe Ala Ala Ile Tyr Arg Arg His Arg Gly Gly Ser Val Thr Tyr Val 195 200 205

Cys Gly Gly Ser Leu Ile Ser Pro Cys Trp Val Ile Ser Ala Thr His 210 215 220

Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr Ile Val Tyr Leu Gly
225 230 235 240

Arg Ser Arg Leu Asn Ser Asn Thr Gln Gly Glu Met Lys Phe Glu Val 245 250 255

Glu Asn Leu Ile Leu His Lys Asp Tyr Ser Ala Asp Thr Leu Ala His 260 265 270

His Asn Asp Ile Ala Leu Leu Lys Ile Arg Ser Lys Glu Gly Arg Cys 275 280 285

Ala Gln Pro Ser Arg Thr Ile Gln Thr Ile Cys Leu Pro Ser Met Tyr 290 295 300

Asn Asp Pro Gln Phe Gly Thr Ser Cys Glu Ile Thr Gly Phe Gly Lys 305 310 315

Glu Asn Ser Thr Asp Tyr Leu Tyr Pro Glu Gln Leu Lys Met Thr Val 325 330 335

Val Lys Leu Ile Ser His Arg Glu Cys Gln Gln Pro His Tyr Tyr Gly 340 345 350

Ser Glu Val Thr Thr Lys Met Leu Cys Ala Ala Asp Pro Gln Trp Lys 355 360 365

Thr Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Ser Leu 370 380

Gln Gly Arg Met Thr Leu Thr Gly Ile Val Ser Trp Gly Arg Gly Cys

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Ala Leu Lys Asp Lys Pro Gly Val Tyr Thr Arg Val Ser His Phe Leu 405 410 415

Pro Trp Ile Arg Ser His Thr Lys Glu Gln Asn Gly Leu Ala Leu 420 425 430

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Glu Asn Gln Pro Trp Phe Ala Ala Ile Tyr Arg Arg His Arg Gly Gly
35 40 45

Ser Val Thr Tyr Val Cys Gly Gly Ser Leu Ile Ser Pro Cys Trp Val 50 60

Ile Ser Ala Thr His Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr 65 75 80

Ile Val Tyr Leu Gly Arg Ser Arg Leu Asn Ser Asn Thr Gln Gly Glu 85 90 95

Met Lys Phe Glu Val Glu Asn Leu Ile Leu His Lys Asp Tyr Ser Ala 100 105 110

Asp Thr Leu Ala His His Asn Asp Ile Ala Leu Leu Lys Ile Arg Ser 115 120 125

Lys Glu Gly Arg Cys Ala Gln Pro Ser Arg Thr Ile Gln Thr Ile Cys 130 135 140

Leu Pro Ser Met Tyr Asn Asp Pro Gln Phe Gly Thr Ser Cys Glu Ile 145 150 155 160

Thr Gly Phe Gly Lys Glu Asn Ser Thr Asp Tyr Leu Tyr Pro Glu Gln
165 170 175

Leu Lys Met Thr Val Val Lys Leu Ile Ser His Arg Glu Cys Gln Gln 180 185 190

Pro His Tyr Tyr Gly Ser Glu Val Thr Thr Lys Met Leu Cys Ala Ala 195 200 205

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Trp Gly Arg Gly Cys Ala Leu Lys Asp Lys Pro Gly Val Tyr Thr Arg
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Ala Gln Gly Pro Glu Phe Trp Cys Gln Ser Leu Glu Gln Ala Leu Gln
Cys Arg Ala Leu Gly His Cys Leu Gln Glu Val Trp Gly His Val Gly
Ala Asp Asp Leu Cys Gln Glu Cys Glu Asp Ile Val His Ile Leu Asn
Lys Met Ala Lys Glu Ala Ile Phe Gln Asp Thr Met Arg Lys Phe Leu
Glu Gln Glu Cys Asn Val Leu Pro Leu Lys Leu Leu Met Pro Gln Cys
            100
Asn Gln Val Leu Asp Asp Tyr Phe Pro Leu Val Ile Asp Tyr Phe Gln
Asn Gln Thr Asp Ser Asn Gly Ile Cys Met His Leu Gly Leu Cys Lys
    130
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Ser Arg Gln Pro Glu Pro Glu Gln Glu Pro Gly Met Ser Asp Pro Leu 145 150 160 Pro Lys Pro Leu Arg Asp Pro Leu Pro Asp Pro Leu Leu Asp Lys Leu Val Leu Pro Val Leu Pro Gly Ala Leu Gln Ala Arg Pro Gly Pro His 180 185 Thr Gln Asp Leu Ser Glu Gln Gln Phe Pro Ile Pro Leu Pro Tyr Cys Trp Leu Cys Arg Ala Leu Ile Lys Arg Ile Gln Ala Met Ile Pro Lys 210 215 220 Gly Ala Leu Ala Val Ala Val Ala Gln Val Cys Arg Val Val Pro Leu 225 240 Val Ala Gly Gly Ile Cys Gln Cys Leu Ala Glu Arg Tyr Ser Val Ile 245 250 255 Leu Leu Asp Thr Leu Leu Gly Arg Met Leu Pro Gln Leu Val Cys Arg 260 Leu Val Leu Arg Cys Ser Met Lys Leu Lys Pro Ser Ser Pro Pro Glu 275 280 Glu Leu Lys Phe Gln Cys Gly Gln Lys Thr Leu Arg Pro Arg Phe Lys 290 Ile Ile Gly Gly Glu Phe Thr Thr Ile Glu Asn Gln Pro Trp Phe Ala 305 310 315 320 Ala Ile Tyr Arg Arg His Arg Gly Gly Ser Val Thr Tyr Val 325 330 Gly Ser Leu Ile Ser Pro Cys Trp Val Ile Ser Ala Thr His Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr Ile Val Tyr Leu Gly Arg Ser 360 Arg Leu Asn Ser Asn Thr Gln Gly Glu Met Lys Phe Glu Val Glu Asn Leu Ile Leu His Lys Asp Tyr Ser Ala Asp Thr Leu Ala His His Asn 385 395 390 400 Asp Ile Ala Leu Leu Lys Ile Arg Ser Lys Glu Gly Arg Cys Ala Gln Pro Ser Arg Thr Ile Gln Thr Ile Cys Leu Pro Ser Met Tyr Asn Asp 420 Pro Gln Phe Gly Thr Ser Cys Glu Ile Thr Gly Phe Gly Lys Glu Asn Ser Thr Asp Tyr Leu Tyr Pro Glu Gln Leu Lys Met Thr Val Val Lys 450 455

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Leu Ile Ser His Arg Glu Cys Gln Gln Pro His Tyr Tyr Gly Ser Glu
465
                     470
                                                              480
Val Thr Thr Lys Met Leu Cys Ala Ala Asp Pro Gln Trp Lys Thr Asp
Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Ser Leu Gln Gly
            500
                                 505
                                                      510
Arg Met Thr Leu Thr Gly Ile Val Ser Trp Gly Arg Gly Cys Ala Leu
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Lys Asp Lys Pro Gly Val Tyr Thr Arg Val Ser His Phe Leu Pro Trp
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                                             540
Ile Arg Ser His Thr Lys Glu Gln Asn Gly Leu Ala Leu
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Ala Gln Gly Pro Glu Phe Trp Cys Gln Ser Leu Glu Gln Ala Leu Gln
Cys Arg Ala Leu Gly His Cys Leu Gln Glu Val Trp Gly His Val Gly
Ala Asp Asp Leu Cys Gln Glu Cys Glu Asp Ile Val His Ile Leu Asn
 65
Lys Met Ala Lys Glu Ala Ile Phe Gln Asp Thr Met Arg Lys Phe Leu
Glu Gln Glu Cys Asn Val Leu Pro Leu Lys Leu Leu Met Pro Gln Cys
Asn Gln Val Leu Asp Asp Tyr Phe Pro Leu Val Ile Asp Tyr Phe Gln
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Asn Gln Thr Asp Ser Asn Gly Ile Cys Met His Leu Gly Leu Cys Lys Ser Arg Gln Pro Glu Pro Glu Gln Glu Pro Gly Met Ser Asp Pro Leu Pro Lys Pro Leu Arg Asp Pro Leu Pro Asp Pro Leu Leu Asp Lys Leu Val Leu Pro Val Leu Pro Gly Ala Leu Gln Ala Arg Pro Gly Pro His Thr Gln Asp Leu Ser Glu Gln Gln Phe Pro Ile Pro Leu Pro Tyr Cys Trp Leu Cys Arg Ala Leu Ile Lys Arg Ile Gln Ala Met Ile Pro Lys Gly Ala Leu Ala Val Ala Val Ala Gln Val Cys Arg Val Val Pro Leu Val Ala Gly Gly Ile Cys Gln Cys Leu Ala Glu Arg Tyr Ser Val Ile Leu Leu Asp Thr Leu Leu Gly Arg Met Leu Pro Gln Leu Val Cys Arg Leu Val Leu Arg Cys Ser Met Gln Ile Ser Lys Pro Ser Ser Pro Pro Glu Glu Leu Lys Phe Gln Cys Gly Gln Lys Thr Leu Arg Pro Arg Phe Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile Glu Asn Gln Pro Trp Phe Ala Ala Ile Tyr Arg Arg His Arg Gly Gly Ser Val Thr Tyr Val Cys Gly Gly Ser Leu Ile Ser Pro Cys Trp Val Ile Ser Ala Thr His Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr Ile Val Tyr Leu Gly Arg Ser Arg Leu Asn Ser Asn Thr Gln Gly Glu Met Lys Phe Glu Val Glu Asn Leu Ile Leu His Lys Asp Tyr Ser Ala Asp Thr Leu Ala His His Asn Asp Ile Ala Leu Leu Lys Ile Arg Ser Lys Glu Gly Arg Cys Ala Gln Pro Ser Arg Thr Ile Gln Thr Ile Cys Leu Pro Ser Met Tyr Asn Asp Pro Gln Phe Gly Thr Ser Cys Glu Ile Thr Gly Phe Gly Lys Glu

435 440 445

Asn Ser Thr Asp Tyr Leu Tyr Pro Glu Gln Leu Lys Met Thr Val Val 450 460 Lys Leu Ile Ser His Arg Glu Cys Gln Gln Pro His Tyr Tyr Gly Ser 465 480 Glu Val Thr Thr Lys Met Leu Cys Ala Ala Asp Pro Gln Trp Lys Thr 485 490 Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Ser Leu Gln 500 Gly Arg Met Thr Leu Thr Gly Ile Val Ser Trp Gly Arg Gly Cys Ala 515 520 Leu Lys Asp Lys Pro Gly Val Tyr Thr Arg Val Ser His Phe Leu Pro 530 535 Trp Ile Arg Ser His Thr Lys Glu Gln Asn Gly Leu Ala Leu 545 550 555

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Homo sapiens

<220>

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Glu Ser Ile Pro Ser Leu Glu Ala Leu Thr Arg Lys Val His Asn Phe
    130
                         135
Gln Met Glu Cys Ser Leu Gln Ala Lys Pro Ala Val Pro Thr Ser Lys
145
                                                              160
Leu Gly Gln Ala Glu Gly Arg Asp Ala Gly Ser Ala Pro Ser Gly Gly
                165
                                     170
                                                          175
Asp Pro Ala Phe Leu Gly Met Ala Val Ser Thr Leu Cys Gly Glu Val
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                                 185
Pro Leu Tyr Tyr Ile
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Val Ile Val Gly Ala Leu Leu Met Gly Leu
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Val Val Val Val Leu Ile Val Val Ile Val Gly Ala Leu Leu
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25

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Gly Ala Arg Ser Tyr Gln Val Ile Cys Arg Asp Glu Lys Thr Gln Met
Ile Tyr Gln Gln His Gln Ser Trp Leu Arg Pro Val Leu Arg Ser Asn
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Arg Val Glu Tyr Cys Trp Cys Asn Ser Gly Arg Ala Gln Cys His Ser
Val Pro Val Lys Ser Cys Ser Glu Pro Arg Cys Phe Asn Gly Gly Thr
85 90 95
Cys Gln Gln Ala Leu Tyr Phe Ser Asp Phe Val Cys Gln Cys Pro Glu
            100
                                 105
Gly Phe Ala Gly Lys Cys Cys Glu Ile Asp Thr Arg Ala Thr Cys Tyr
Glu Asp Gln Gly Ile Ser Tyr Arg Gly Thr Trp Ser Thr Ala Glu Ser
     130
Gly Ala Glu Cys Thr Asn Trp Asn Ser Ser Ala Leu Ala Gln Lys Pro
                                                              160
Tyr Ser Gly Arg Arg Pro Asp Ala Ile Arg Leu Gly Leu Gly Asn His
                                                          175
Asn Tyr Cys Arg Asn Pro Asp Arg Asp Ser Lys Pro Trp Cys Tyr Val
Phe Lys Ala Gly Lys Tyr Ser Ser Glu Phe Cys Ser Thr Pro Ala Cys
        195
                             200
Ser Glu Gly Asn Ser Asp Cys Tyr Phe Gly Asn Gly Ser Ala Tyr Arg
Gly Thr His Ser Leu Thr Glu Ser Gly Ala Ser Cys Leu Pro Trp Asn
225
                    230
                                                              240
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Met Gly Leu

Ser Met Ile Leu Ile Gly Lys Val Tyr Thr Ala Gln Asn Pro Ser Ala Gln Ala Leu Gly Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Gly Asp Ala Lys Pro Trp Cys His Val Leu Lys Asn Arg Arg Leu Thr Trp Glu Tyr Cys Asp Val Pro Ser Cys Ser Thr Cys Gly Leu Arg Gln Tyr Ser Gln Pro Gln Phe Arg Ile Lys Gly Gly Leu Phe Ala Asp Ile Ala Ser His Pro Trp Gln Ala Ala Ile Phe Ala Lys His Arg Arg Ser Pro Gly Glu Arg Phe Leu Cys Gly Gly Ile Leu Ile Ser Ser Cys Trp Ile Leu Ser Ala Ala His Cys Phe Gln Glu Arg Phe Pro Pro His His Leu Thr Val Ile Leu Gly Arg Thr Tyr Arg Val Val Pro Gly Glu Glu Glu Gln Lys Phe Glu Val Glu Lys Tyr Ile Val His Lys Glu Phe Asp Asp Asp Thr Tyr Asp Asn Asp Ile Ala Leu Leu Gln Leu Lys Ser Asp Ser Ser Arg Cys Ala Gln Glu Ser Ser Val Val Arg Thr Val Cys Leu Pro Pro Ala Asp Leu Gln Leu Pro Asp Trp Thr Glu Cys Glu Leu Ser Gly Tyr Gly Lys His Glu Ala Leu Ser Pro Phe Tyr Ser Glu Arg Leu Lys Glu Ala His Val Arg Leu Tyr Pro Ser Ser Arg Cys Thr Ser Gln His Leu Leu Asn Arg Thr Val Thr Asp Asn Met Leu Cys Ala Gly Asp Thr Arg Ser Gly Gly Pro Gln Ala Asn Leu His Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Leu Asn Asp Gly Arg Met Thr Leu Val Gly Ile Ile Ser Trp Gly Leu Gly Cys Gly Gln Lys Asp Val Pro Gly Val Tyr Thr Lys Val Thr Asn Tyr Leu Asp Trp Ile Arg Asp Asn Met

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Cys Trp Leu Cys Arg Ala Leu Ile Lys Arg Ile Gln Ala Met Ile Pro
Lys Gly Ala Leu Ala Val Ala Val Ala Gln Val Cys Arg Val Val Pro
Leu Val Ala Gly Gly Ile Cys Gln Cys Leu Ala Glu Arg Tyr Ser Val
 65
                                                               80
Ile Leu Leu Asp Thr Leu Leu Gly Arg Met Leu Pro Gln Leu Val Cys
Arg Leu Val Leu Arg Cys Ser Met Lys Pro Ser Ser Pro Pro Glu Glu
Leu Lys Phe Gln Cys Gly Gln Lys Thr Leu Arg Pro Arg Phe Lys Ile
        115
                             120
Ile Gly Gly Glu Phe Thr Thr Ile Glu Asn Gln Pro Trp Phe Ala Ala
    130
Ile Tyr Arg Arg His Arg Gly Gly Ser Val Thr Tyr Val Cys Gly Gly
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Arg Pro

Ser Leu Ile Ser Pro Cys Trp Val Ile Ser Ala Thr His Cys Phe Ile 165 Asp Tyr Pro Lys Lys Glu Asp Tyr Ile Val Tyr Leu Gly Arg Ser Arg 180 Leu Asn Ser Asn Thr Gln Gly Glu Met Lys Phe Glu Val Glu Asn Leu 195 Ile Leu His Lys Asp Tyr Ser Ala Asp Thr Leu Ala His His Asn Asp 210 Ile Ala Leu Leu Lys Ile Arg Ser Lys Glu Gly Arg Cys Ala Gln Pro 225 230 240 Ser Arg Thr Ile Gln Thr Ile Cys Leu Pro Ser Met Tyr Asn Asp Pro 245 Gln Phe Gly Thr Ser Cys Glu Ile Thr Gly Phe Gly Lys Glu Asn Ser 260 265 Thr Asp Tyr Leu Tyr Pro Glu Gln Leu Lys Met Thr Val Val Lys Leu 280 Ile Ser His Arg Glu Cys Gln Gln Pro His Tyr Tyr Gly Ser Glu Val 290 295 Thr Thr Lys Met Leu Cys Ala Ala Asp Pro Gln Trp Lys Thr Asp Ser 305 320 Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Ser Leu Gln Gly Arg 325 335 330 Met Thr Leu Thr Gly Ile Val Ser Trp Gly Arg Gly Cys Ala Leu Lys 345 340 Asp Lys Pro Gly Val Tyr Thr Arg Val Ser His Phe Leu Pro Trp Ile 355 360 Arg Ser His Thr Lys Glu Gln Asn Gly Leu Ala Leu His His His 375 380 His His 385 <210> 26 <211> 383 <212> PRT <213> Artificial Sequence <220> <221> **SIGNAL** <222> (1) ... (20)<223> Signal sequence of the human urokinase plasminogen activator <220> <221> **PEPTIDE**

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160

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                                  25
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Phe Gln Cys Gly Gln Lys Thr Leu Arg Pro Arg Phe Lys Ile Ile Gly
Gly Glu Phe Thr Thr Ile Glu Asn Gln Pro Trp Phe Ala Ala Ile Tyr
                          55
     50
                                              60
Arg Arg His Arg Gly Gly Ser Val Thr Tyr Val Cys Gly Gly Ser Leu 65
Ile Ser Pro Cys Trp Val Ile Ser Ala Thr His Cys Phe Ile Asp Tyr
                                      90
Pro Lys Lys Glu Asp Tyr Ile Val Tyr Leu Gly Arg Ser Arg Leu Asn
                               105
Ser Asn Thr Gln Gly Glu Met Lys Phe Glu Val Glu Asn Leu Ile Leu
His Lys Asp Tyr Ser Ala Asp Thr Leu Ala His His Asn Asp Ile Ala
    130
Leu Leu Lys Ile Arg Ser Lys Glu Gly Arg Cys Ala Gln Pro Ser Arg
145
Thr Ile Gln Thr Ile Cys Leu Pro Ser Met Tyr Asn Asp Pro Gln Phe
                                     170
                                                         175
Gly Thr Ser Cys Glu Ile Thr Gly Phe Gly Lys Glu Asn Ser Thr Asp
Tyr Leu Tyr Pro Glu Gln Leu Lys Met Thr Val Val Lys Leu Ile Ser
                            200
His Arg Glu Cys Gln Gln Pro His Tyr Tyr Gly Ser Glu Val Thr Thr
Lys Met Leu Cys Ala Ala Asp Pro Gln Trp Lys Thr Asp Ser Cys Gln
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Gly Asp Ser Gly Gly Pro Leu Val Cys Ser Leu Gln Gly Arg Met Thr Leu Thr Gly Ile Val Ser Trp Gly Arg Gly Cys Ala Leu Lys Asp Lys 260 270 Pro Gly Val Tyr Thr Arg Val Ser His Phe Leu Pro Trp Ile Arg Ser His Thr Lys Glu Gln Asn Gly Leu Ala Leu Phe Pro Ile Pro Leu Pro Tyr Cys Trp Leu Cys Arg Ala Leu Ile Lys Arg Ile Gln Ala Met Ile Pro Lys Gly Ala Leu Ala Val Ala Val Ala Gln Val Cys Arg Val Val Pro Leu Val Ala Gly Gly Ile Cys Gln Cys Leu Ala Glu Arg Tyr Ser Val Ile Leu Leu Asp Thr Leu Leu Gly Arg Met Leu Pro Gln Leu Val Cys Arg Leu Val Leu Arg Cys Ser Met His His His His His